The Physical Geographical Change of the Great Plains during the Dust Bowl (1930’s)

Overview: This lesson shows how the Dust Bowl climate changed the physical geography of the Great Plains and forced the eventual relocation of its residents.

National Geography Standards:

Human Systems 9. The characteristics, distribution, and migration of human populations on Earth's surface.

Environment and Society 15. How physical systems affect human systems.

Oregon Geography Content Standards

H.S 15 Analyze distribution and characteristics of human settlement patterns

Oregon Common Core State Standards

ELA Anchor Standard #2: Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

11-12.WHST.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

HS.61. Analyze an event, issue, problem, or phenomenon, identifying characteristics, influences, causes, and both short- and long-term effects.

Objectives:

• Students will analyze a map of the Great Plains region affected by the Dust Bowl using the map analysis tool.
• Students will analyze different Dust Bowl primary sources using the image analysis tool and write 3-5 bullet notes for each picture.
• Students will write a 5 paragraph essay explaining how the climate in the Great Plains changed and forced the spatial migration of families.

Grade Levels: 11th Grade  Time: 68 minutes

Materials:

• Each student will need a map and image analysis tool. (Appendix A and B)
• Full size pictures that students will analyze during gallery walk activity. (Appendix C-X)
• Students will need to use lined notebook paper for note taking.
• Pen or Pencil
• (Attached) Essential question 5-paragraph essay prompt. The teacher will need to print enough for all of their students or write on the whiteboard. “How did the environment in the Great Plains affect the geography and settlement patterns of settlers in the 1930’s?”

Background: (Student should have basic background knowledge of the Dust Bowl based on prior lessons)

The Great Plains were home to some of the most fertile soil in the world and had farmers flocking from the East coast ready to start their new life. In some places, fertile topsoil was 8 inches thick which made farming almost anything relatively easy. Over time, over farming and intense cattle grazing destroyed the vegetation and nutrients in the soil. In 1934, severe drought struck the already struggling farmers. Crop yields sharply declined in the early 1930’s until it became almost impossible to grow anything. With no vegetation to hold the soil and no mountains to block the breezy winds coming from the West, the Great Plains transformed from a farming paradise to a barren dusty uninhabitable wasteland. This inquiry-based lesson will uncover challenges that families in the Great Plains faced and will show how the Dust Bowl climate changed the physical geography of the area.

Procedures (Lesson Plan):

Introduction:

Anticipatory Set (Bell Ringer) 5 minutes:

Why was the Great Plains such an attractive geographic location for East coast settlers prior to the Dust Bowl? Students will write their bell ringer on a separate piece of paper or in their notebook.

- Extremely Fertile Soil
- Homestead Act
- Huge plots of land
- Opportunity

(The answer to the bellringer would have been discussed and built upon in previous classes.)

Discuss answers as a class and provide clarification (5 minutes):

Body:

Input (Explaining activity 5 minutes):

Students are going to be doing a gallery walk activity on the Dust Bowl. The main purpose of this lesson is for students to understand the impact that changing climate had on the geography of the Great Plains and the residents living there.

- Lay out the pictures in numerical order (attached) around the room and have students take notes in their notebooks (or lined paper) about what they observe in the pictures. Students will take 3-5 bullet notes per picture (see model below).
• Hand out the **Map and Image** analysis tool to each student so they can use it during the gallery walk.
• For each picture have each student title the primary source in their own words and write bullet points under the title.
• Remind students to reflect on prior knowledge of the Great Plains before the Dust Bowl climate changed the geography and the viability of the land.
• Bullet note observations will be submitted with 5 paragraph essay (formative assessment and check for understanding).

**Input (Modeling activity 5 minutes):**
Model the activity using one primary source with the class. Students should be asking themselves (Bullet point the observations in a notebook).
   1. What types of buildings are in the picture?
   2. Who’s in the images?
   3. What type of transportation are in the images?
   4. Are there recognizable objects in the image? What are they used for?
   5. What does the landscape and other physical features look like during and after the Dust Bowl? Compare to prior knowledge of the Great Plains (very fertile soil).

**These and other analysis tools can be found on the Center for Geography Education in Oregon wiki page.** [https://2016orgeo.pbworks.com/w/page/107627970/Day%202](https://2016orgeo.pbworks.com/w/page/107627970/Day%202)

**Independent Practice/Gallery Walk activity:**
• Students will partner with a classmate and start at one of the primary source images. They will have two minutes per image and rotate clockwise until completed (24 images = 48 minutes). You don’t have to have 24 groups depending on the size of your class.
   However, there will be 24 rotations so each student can analyze all the images. Only one pair of students at each image.
• Students only rotate when the teacher tells them to (keep an eye on the clock or use a timer). Rotate clockwise. Keeps an organized activity/lesson.

**Close (check for understanding):**
• Ask the class to share thoughts, observations, and reflections of the Dust Bowl primary sources.
• After students share their thoughts as a class discuss the main geographical changes of the Great Plains during and after the Dust Bowl and the effect it had on the settlers.

**Assessment:**
Students will answer the essential question below during the next full class period. Use the attached rubric to assess each student’s learning.

**Essential Question/Five Paragraph Essay:**
How did the change in climate in the Great Plains affect the physical geography and the settlement patterns of Americans in the 1930’s?

Possible stems for struggling students
• Compare before and after.
• Did humans play any role in the change in geography? (over farming, no crop rotations, cattle grazing)
• How did the Dust Bowl change the physical land? (Soil, trees)

Resources: These thumbnails are the pictures used for the gallery walk and full size images are attached in the appendix (pages 11-34).

Migration routes of people during the Dust Bowl

Impact of the Dust Bowl in the Great Plains

Dust Storm Engulfs House 1934

A farm covered in dust in Cimarron County, Oklahoma.
Mason Mahaffie

Dust Bowl Mother of Seven

http://www-tc.pbs.org/kenburns/dustbowl/media/photos/s7358-lg.jpg

Black Sunday 1936

http://www-tc.pbs.org/kenburns/dustbowl/media/photos/s0446-lg.jpg

Dust Bowl Boy

http://www-tc.pbs.org/kenburns/dustbowl/media/photos/s1654-lg.jpg

Government sign promoting land terracing to prevent erosion

http://www-tc.pbs.org/kenburns/dustbowl/media/photos/s1074-lg.jpg

A farmer holds out his hand to represent how high the wheat should be in a field. Grant County, North Dakota. July 1936.

http://www-tc.pbs.org/kenburns/dustbowl/media/photos/s1568-lg.jpg

Abandoned Windmill Farm

http://www-tc.pbs.org/kenburns/dustbowl/media/photos/s3459-lg.jpg

http://www.pbs.org/kenburns/dustbowl/photos/
Oklahoma dust bowl refugees. San Fernando, California
https://www.loc.gov/item/fsa1998018535/PP/

Son of farmer in dust bowl area. Cimarron County, Oklahoma
https://www.loc.gov/item/fsa1998018978/PP/

Abandoned farm in the dust bowl area. Oklahoma
https://www.loc.gov/item/fsa1998018996/PP/

Adobe farmhouse of rehabilitation client. Cimarron County, Oklahoma. Dust bowl
https://www.loc.gov/item/fsa1998018968/PP/

Fence Dust Bowl. Coldwater District, north of Dalhart, Texas
https://www.loc.gov/item/fsa2000001699/PP/

Liberal (vicinity), Kan. Soil blown by dust bowl winds piled up in large drifts on a farm
https://www.loc.gov/item/2012647036/

Dust bowl farmer raising fence to keep it from being buried under drifting sand. Cimarron County, Oklahoma
https://www.loc.gov/item/fsa1998018982/PP/
Appendix A

Image (Photo, Print, Painting, etc.) Analysis Tool with a Geographic Lens

Please use this analysis tool while you analyze the primary source images during the gallery walk.

<table>
<thead>
<tr>
<th>Observe</th>
<th>Reflect</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>What types of buildings are in the image?</td>
<td>If there is no date, when do you think the image was made?</td>
<td>What is the bias or point of view of this image?</td>
</tr>
<tr>
<td>What types of transportation are in the image?</td>
<td>What place or region does this image show?</td>
<td>How does this image connect to other documents, maps, recordings, images, or artifacts?</td>
</tr>
<tr>
<td>Are there objects in the image? Do you recognize them? What are they used for?</td>
<td>Can you identify a geographic theme (region, place, movement, physical system, human-environment interaction, etc.) for this image?</td>
<td>What geographic questions would you like to ask the creator of this image?</td>
</tr>
<tr>
<td>Describe the landscape and physical features in the image.</td>
<td>Describe the spatial patterns illustrated in this image. These patterns might be in the people, transportation, buildings, or landscape.</td>
<td></td>
</tr>
<tr>
<td>What geographic event / issue / problem does this image illustrate?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B

Map Analysis Tool with a Geographic Lens

Please use this map analysis tool as you observe, reflect, and question each map.

<table>
<thead>
<tr>
<th>Observe</th>
<th>Reflect</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>What area of the world does this map represent? Does this map show a large area of the Earth's surface or a small area?</td>
<td>What was the most likely purpose for this map? How do you know?</td>
<td>Why is the map significant or important?</td>
</tr>
<tr>
<td>What kinds of labels are on this map?</td>
<td>What do you know about this time period? What do any other dates on this map represent?</td>
<td>If you were the cartographer, how could you change this map? How could you use this map to understand the present?</td>
</tr>
<tr>
<td>What colors are on the map?</td>
<td>Does this map illustrate or describe spatial patterns (movement, connections, etc.)?</td>
<td>How does this map illustrate human, physical, economic, societal, cultural, and political conditions for the time when the map was made?</td>
</tr>
<tr>
<td>Is there a legend on the map?</td>
<td>What was the motivation of the organization or person making the map?</td>
<td>What sources may have been used to make this map?</td>
</tr>
<tr>
<td></td>
<td>What features on the map represent a place, region, and/or theme?</td>
<td>How could you (as an individual) use this map?</td>
</tr>
<tr>
<td></td>
<td>How does this map represent and/or illustrate geographic themes (places, regions, human-environment interaction, movement, physical systems, etc.)?</td>
<td>What else do you think should be included in the legend for this map?</td>
</tr>
</tbody>
</table>
Directions: Write a 5 paragraph essay answering the essential question from the Dust Bowl Unit. Use the front and back of this page and attach lined notebook paper if needed. When completed please attached your bullet notes from the gallery walk to the back.

Essential Question: How did the change in climate in the Great Plains affect the physical geography and the settlement patterns of American in the 1930’s?
### 5 Paragraph Essay Scoring Rubric

<table>
<thead>
<tr>
<th>Traits</th>
<th>Human Impact on the Geography of the Great Plains</th>
<th>Dust Bowl Climate Impact on the Geography of the Great Plains</th>
<th>Dust Bowl Climate Impact on the Residents of the Great Plains States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight of Grade</td>
<td>40%</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>Mastery</td>
<td>Final product provides three or more explanations outlining how humans affected the physical geography of the Great Plains.</td>
<td>Final product provides three or more explanations outlining how the Dust Bowl climate affected the physical geography of the Great Plains.</td>
<td>Final product provides three or more explanations outlining how the Dust Bowl climate impacted the residents of the Great Plains.</td>
</tr>
<tr>
<td></td>
<td>• Over farming</td>
<td>• Severe Drought</td>
<td>• Couldn’t farm = no food</td>
</tr>
<tr>
<td></td>
<td>• No Crop Rotations</td>
<td>• Dust Storms</td>
<td>• Breathing issues (dust)</td>
</tr>
<tr>
<td></td>
<td>• Cattle Grazing</td>
<td>• Destroyed Vegetation</td>
<td>• Bad weather</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Moved west</td>
</tr>
<tr>
<td>Advanced</td>
<td>Final product provides two explanations outlining how Humans affected the physical geography of the Great Plains.</td>
<td>Final product provides two explanations outlining how the Dust Bowl climate affected the physical geography of the Great Plains.</td>
<td>Final product provides two explanations outlining how the Dust Bowl climate impacted the residents of the Great Plains.</td>
</tr>
<tr>
<td>Meets</td>
<td>Final product provides one explanation of how humans affected the physical geography of the Great Plains.</td>
<td>Final product provides one explanation of how the Dust Bowl climate affected the physical geography of the Great Plains.</td>
<td>Final product provides one explanation of how the Dust Bowl impacted the residents of the Great Plains.</td>
</tr>
<tr>
<td>Approaching</td>
<td>Final product does not give an explanation of how the Dust Bowl climate affected the physical geography of the Great Plains.</td>
<td>Final product does not provide an explanation of how the Dust Bowl climate affected the physical geography of the Great Plains.</td>
<td>Final product does not provide an explanation of how the Dust Bowl impacted the residents of the Great Plains.</td>
</tr>
</tbody>
</table>
Appendix D
Appendix D
Appendix E
Appendix F
Appendix H
Appendix I
Appendix J
Appendix L
Appendix M
Appendix N
Appendix O
Appendix Q
Appendix R
Appendix S
Appendix T
Appendix U
Appendix V
Appendix W
Appendix X